An App that Brings Us Together

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Motivation

- *"Technology may help us to feel less lonely, but it doesn't really make us any less alone."*
- Want to keep in touch with old roommates, build new friendships, and be less lonely.
- Existing methods don't work:
  - Facebook: too much overhead, too formal
  - Text messaging/e-mail: feels like imposing.
  - Pair: Only for couples

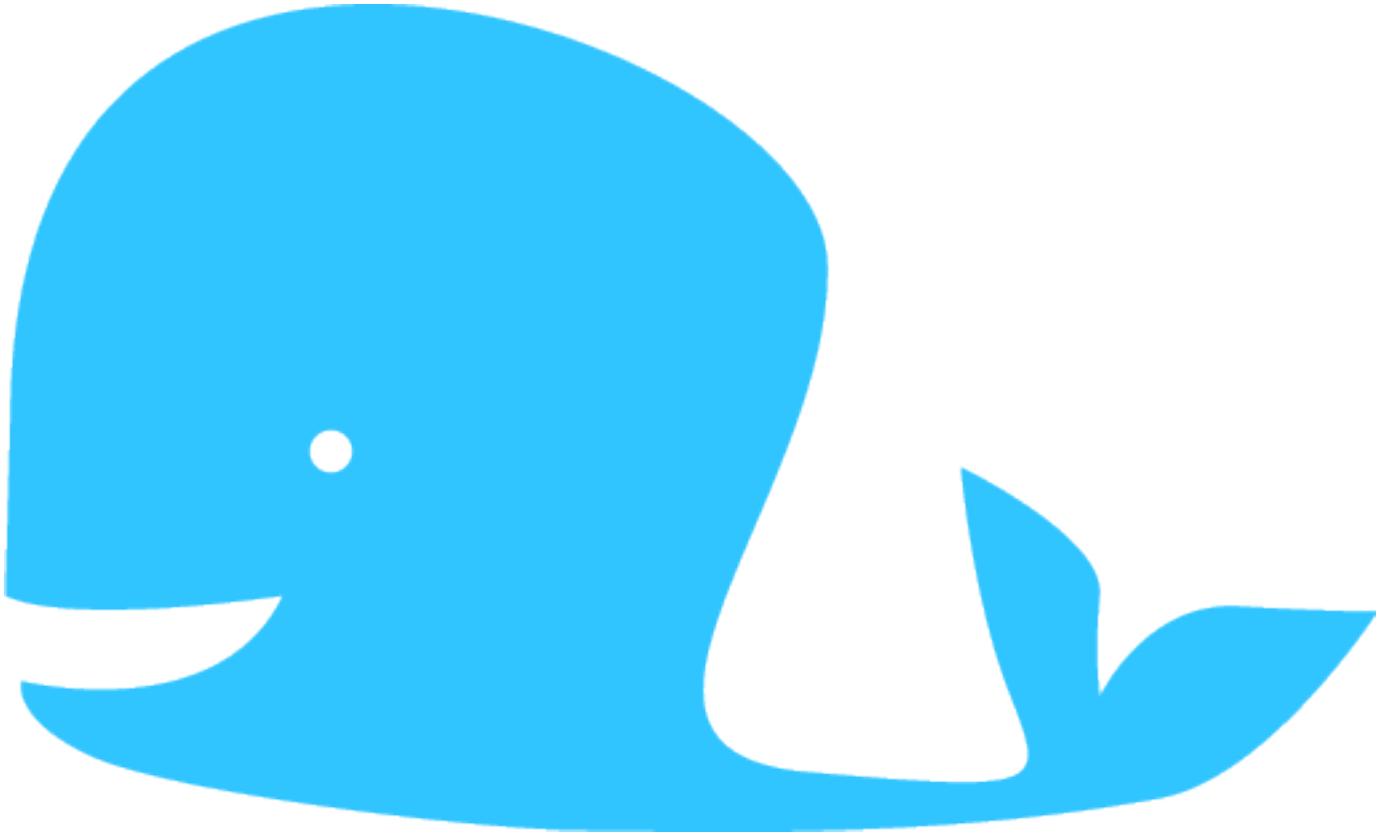
Idea

- An application that brings people together:
  - In-person contact
  - Casual/low-stakes invitations
  - Casual/low-overhead events
  - In your pocket, on the go

What We Did

- What is Glue?
  - An application to invite your friends to join you in anything you're doing.
  - An application to find if any friends are doing something you'd like to join in doing.

Demo



How It Works

App ←→ Server

- Glue's multi-user needs required a server.
- App makes calls to server, which maintains authoritative information on users and events
- Server responds with verification that authoritative copy has changed to reflect client's requests or responds with information requested by client.
- App displays information and stores local copies of data for future reference.

How It Works

- Front-End:
  - Written in Objective-C / iOS / Xcode
  - SingletonUser
  - “Create Event” should be easy
  - UITabBar, UINavigation

How It Works

- Back-End:
  - Modifies authoritative copy of data, serves events or users from the authoritative copy of data, checks authentication credentials, performs searches, notifies client if information has been modified since it was last requested…
  - Data stored as JSON objects in flat files (users.json, events.json, auth.json)
  - Written in Python using the Bottle micro-framework

How It Works

- Security:
  - Two levels of authentication: anyone in the system or a particular user
    - Key hard-coded into the application
    - When user logs in, server generates a hash of the userid with a secret key, which is the token. Application stores this token for the session.
    - When user performs a user-specific function, the application presents this token. Server verifies the token by performing the same hash function on the userid in the token.
    - Secret key can be changed at any time on the server.
  - HTTPS connection encrypts packets so eavesdroppers can't gain access by spoofing user authentication details.

Lessons Learned

- Self-confidence! We can learn anything ☺
- API design is important…
- Authentication/security
- Back-end skillz
- iOS skillz

Next Steps

- Twilio Integration (text notifications, notify non-users to join)
- Filtering events by category, time, etc.
- Eventually:
  - Filtering events by geographic location
  - Facebook and phonebook integration for adding friends
  - Web Interface for non-iPhone users?
  - Deploying to testers then the App Store?
  - Scaling to handle many users quickly

Questions?